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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,075	12/31/2001	Robert A. Boudrie	P 283212 EMC-01-185	5623
35408	7590	04/15/2004	EXAMINER	
ANTHONY MIELE PALMER & DODGE, LLP 111 HUNTINGTON AVENUE BOSTON, MA 02199			ROBINSON, GRETA LEE	
			ART UNIT	PAPER NUMBER
			2177	
DATE MAILED: 04/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/032,075	BOUDRIE ET AL.
	Examiner	Art Unit
	Greta L. Robinson	2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 31 December 2001.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-13 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

1. Claims 1-13 are pending in the present application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura et al. US Patent 5,720,026 in view of Levy et al. *Incremental Recovery in Main Memory Database Systems*.

Regarding claim 1, Uemura et al. teaches a method for incrementally backing up data from a logically represented volume on disk media, accessible by a client through a network connection, the client comprising an enterprise database application [note: column 7 lines 6-15], said method comprising:

identifying tracks of the logically represented volume that have changed since a last incremental backup operation by reading fresh indications, (i) wherein each of the fresh data indications correspond to a track of the logically represented volume and (ii) wherein a given fresh data indication is indicative of whether its corresponding track has been changed since a last incremental backup operation [note: column 8 lines 42-61; figure 3];

identifying files for incremental backup, the identified files comprising blocks saved on a track deemed changed since a last incremental backup operation [note: column 4 lines 34-64; column 10 lines 4-67; figure 8]; and

backing up the identified files from the disk media to sequential storage media through a high speed connection [note: figure 1, figure 4 and figure 11; abstract; and column 7 lines 6-15].

Although Uemura et al. teaches the invention substantially as cited above, they do not explicitly teach *fresh indications* correspond to the track of logically represented data. Levy teaches *fresh/stale markings* [note: pages 534-535 Stale/Fresh Markings]. It would have been obvious to one of ordinary skill at the time of the invention to have combined Levy et al. with Uemura et al. because the marking technique would enable

very fast access to the data. Also, this technique would optimize the recovery speed of post-crash transactions.

5. Regarding claims 2-5:

(claim 2) wherein the identified files are backed up in their entirety [note: Uemura et al. allows full backup, see figure 11 element 907 Full Backup Switch; also see column 4 lines 33-36];

(claim 3) wherein the acts of identifying tracks, files ... are performed by a data manager [note: Uemura et al., logical management mechanism 206 figure 2];

(claim 4) wherein said fresh data indications comprises flag bits ... [see: Levy et al. pages 534-535] ;

(claim 5) wherein said fresh data indications comprise change marks [note: Levy et al. pages 534-535 Stale/Fresh Markings].

6. The limitations of system claims 6-9 and computer program claims 10-13 parallel method claims 1-5; therefore they are rejected under the same rationale.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Steiner et al. US Patent 6,023,710

Mohan et al. Us patent 5,455,946

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Menon et al. US Patent 6,397,229 B1

Milillo et al. US patent 6,643,671 B2

Zaremba US patent 6,647,399 B2

Dunham et al. US patent 6,714,952 B2

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (703) 308-7565. The examiner can normally be reached on Mon.-Fri. 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GRETA ROBINSON
PRIMARY EXAMINER

Greta Robinson
Primary Examiner
April 14, 2004